

REMARKS:

In response to the objections to the drawings, Applicants respectfully contend that the drawings satisfy the requirements of 37 CFR 1.83(a) including by showing each feature specified in the claims.

In particular, transmitter 1' of Fig. 6 is an example of a transmitter "configured to transmit auxiliary data to ...[a] receiver by modulating DC disparity of a channel of ...[a] communication link" as recited in claim 1 (as noted in the specification at page 46, line 28-page 48, line 23). Transmitter 1' could include conventional hardware that is programmed (and/or configured, e.g., by preloading appropriate bits into registers of the hardware) in accordance with the invention to encode video data and transmit the resulting video code words in such a manner that a sequence of DC disparity values of the video code words is indicative of auxiliary data. In this way, the noted feature of claim 1 can be implemented by appropriately programming and/or configuring conventional transmitter hardware to implement a modified version of a conventional video data encoding algorithm (e.g., the modified version of a conventional TMDS encoding algorithm described in the specification at page 47, line 15-page 48, line 31). Fig. 6 does not show specific hardware components of transmitter 1' needed to implement claim 1 because such components could be identical to those of a conventional TMDS transmitter (and would appear the same in a drawing regardless of whether it were programmed and/or configured in accordance with the invention or conventionally).

Transmitter 1' (or receiver 2') of Fig. 6 is an example of a transmitter (or receiver) configured to transmit a stream of encoded words over a link such that each of the words has a data structure, "wherein the data structure of each of the words having nonzero DC disparity is indicative of whether said each of the words has been encoded in accordance with ...[a] first encoding operation or ...[a] second encoding operation, and the data structure of each of the words having zero DC disparity is indicative of at least one bit of ... auxiliary data" as recited in amended claim 23 or 28. As noted in the specification, such encoded words can be generated by a modified version of a conventional video data encoding algorithm (e.g., the modified version of a conventional TMDS encoding algorithm described in the specification at page 49, line 21- page 50, line 2, and page 65, lines 22-26). The noted

feature of claim 23 or 28 can be implemented by appropriately programming and/or configuring conventional transmitter (or receiver) hardware to implement a modified version of a conventional video data encoding algorithm (e.g., the modified version of a conventional TMDS encoding algorithm described in the specification at page 49, line 21- page 50, line 2, and page 65, lines 22-26). Fig. 6 does not show specific hardware components of transmitter 1' (or receiver 2') needed to implement claim 23 or 28 because such components could be identical to those of a conventional TMDS transmitter or receiver (and would appear the same in a drawing regardless of whether it were programmed and/or configured in accordance with the invention or conventionally). Encoder 104 or 105 of Fig. 29 can also be implemented such that transmitter 101 of Fig. 29 is an example of the transmitter of claim 23 or 28.

Similarly, the system of Fig. 6 is an example of the system of claim 31 and operation of such a system is an example of the method of claim 29.

Transmitter 1' of Fig. 6 is an example of a transmitter as recited in claim 53, and the Fig. 6 system is an example of the system recited in claim 53. Fig. 6 does not show specific hardware components of transmitter 1' needed to implement claim 53 because such components could be identical to those of a conventional TMDS transmitter and would appear the same in a drawing regardless of whether it were programmed and/or configured in accordance with the invention or conventionally.

Applicants believe that the executed declaration filed on November 7, 2001 (in response to the Notice to File Missing Parts of Application mailed on November 2, 2001) is fully responsive to the requirement in the Office Action for a new oath or declaration. Apparently the Examiner was not cognizant of the filing of the executed declaration when drafting the Office Action.

Claims 23-30 and 112-121 stand rejected under 35 U.S.C. 112, first paragraph, on the ground that they contain subject matter not described adequately in the specification.

Applicants contend for the following reasons that amended claims 23 and 28 (and thus all claims depending directly or indirectly from claim 23 or 28) satisfy the requirements of 35 U.S.C. 112 and are adequately described in the specification. Amended claims 23 and 28 recite a transmitter or receiver configured to transmit a stream of encoded words over a link such that each of the words has a data structure, “wherein the data structure of each of the words having nonzero DC disparity is indicative of whether said each of the words has been encoded in accordance with ...[a] first encoding operation or ...[a] second encoding operation, and the data structure of each of the words having zero DC disparity is indicative of at least one bit of ... auxiliary data.” Such encoded words can be generated by a modified version of the conventional TMDS encoding algorithm described in the specification at page 49, line 21- page 50, line 2, and page 65, lines 22-26.

In conventional TMDS encoding, each 8-bit video data word ($D[7:0]$) to be encoded is mapped to a 9-bit value ($E[8:0]$) in a “transition minimized” region of 9-bit binary space, and each such 9-bit value is then mapped to a 10-bit value ($Q[9:0]$) in DC balanced 10-bit signal space. Conventional TMDS transmitters count the accumulated difference between the number of “one” bits of each value $E[8:0]$ and the number of “zero” bits of each such value, and generate bits $Q[8:0]$ of the code word by either inverting or not inverting bits of the most recently generated value $E[8:0]$ depending on the value of the count (conventional TMDS receivers generate the same count and use it to determine what encoding was applied to generate each received code word). The two possible encodings that may be applied to generate bits $Q[8:0]$ of a 10-bit TMDS code word are examples of the “first encoding operation” and “second encoding operation” recited in claims 23 and 28.

In typical implementations of the invention of claim 23 or 28, an auxiliary data bit is used as the tenth bit $Q[9]$ of an encoded version of a video word $D[7:0]$ when the DC disparity of the code word $Q[9:0]$ is zero (in the case that the DC disparity of the code word $Q[9:0]$ is non-zero, the bit $Q[9]$ is as determined as in conventional TMDS encoding). For example (as noted in the specification at page 49, line 21- page 50, line 2, and page 65, lines 22-26), the encoder of such an implementation can generate a 10-bit code word for an 8-bit input word by appending a next auxiliary bit to be transmitted to each 9-bit value $E[8:0]$ having DC disparity equal to positive one or negative one that generated for the input word.

If the 9-bit value E[8:0] has DC disparity equal to positive one and the auxiliary bit is zero, the encoder uses the first encoding operation (i.e., does not invert any of the bits E[8:0]) and instead uses the value E[8:0] with the appended auxiliary bit as the 10-bit code word. If the value E[8:0] has DC disparity equal to negative one and the auxiliary bit is zero, the encoder applies the second encoding operation to invert bits of the value E[8:0] and uses the 9 bits resulting from this inversion operation (with the appended auxiliary bit) as the 10-bit code word. If the decoder determines that the DC disparity of a 10-bit code word is zero, it assumes that the code word's tenth bit Q[9] is an auxiliary data bit and determines from the disparity of the remaining nine bits (either positive one or negative one) whether the first or second encoding operation was used to generate the code word.

Neither Fig. 29 (and the description thereof) nor the description at p. 47, line 47- p. 48, line 2 is intended to be a description of the invention of claim 23 or 28.

Applicants contend for the following reasons that claim 116 (and thus all claims depending directly or indirectly therefrom) satisfies the requirements of 35 U.S.C. 112 and is adequately described in the specification. Claim 116 recites a system including a transmitter or receiver configured to transmit a first differential signal over a first conductor pair, wherein at least one of the transmitter and receiver is configured to transmit a second differential signal over a second conductor pair, at least one of the transmitter and receiver is configured to transmit a third differential signal indicative of auxiliary data over the two conductor pairs, and the third differential signal is generated as a result of common mode modulation of both the first conductor pair and the second conductor pair such that the difference between common mode level of the first conductor pair and common mode level of the second conductor pair determines said third differential signal. This limitation of claim 116 is described in the specification, for example, at p. 65, lines 6-12 and the cited passage at p. 70, lines 29-34, and is circuitry for performing “differential” common mode modulation, “in which the difference between the modulated common mode levels of the two [conductor] pairs determines the auxiliary data,” as described at p. 65, lines 6-12. Applicants contend that this description is clear and unambiguous.

Applicants contend for the following reasons that claim 118 (and thus claim 119 which depends therefrom) satisfies the requirements of 35 U.S.C. 112 and is adequately described in the specification. Claim 118 recites a transmitter including circuitry configured to assert a differential signal indicative of auxiliary data such that modulation of the common mode level of the differential signal as a function of time is indicative of the auxiliary data. This limitation of claim 118 is described in the specification, for example, at p. 65, lines 6-12 and the cited passage at p. 70, lines 29-34. As described, a differential signal is transmitted over two conductors of the recited conductor pair (i.e., the differential signal is determined by the difference between the signals transmitted on the two conductors) and the auxiliary data signal is determined by common mode modulation of the conductor pair (i.e., the auxiliary data signal is determined by the sum of the signals on the conductors of the conductor pair). Applicants contend that this description is clear and unambiguous.

Applicants contend for the following reasons that claim 120 (and thus claim 121 which depends therefrom) satisfies the requirements of 35 U.S.C. 112 and is adequately described in the specification. Claim 120 recites a transmitter including circuitry configured to assert a first differential signal having a first common mode level to first outputs and a second differential signal having a second common mode level to second outputs, wherein the difference between the first common mode level and the second common mode level determines a third differential signal, and the third differential signal is indicative of auxiliary data. This limitation of claim 120 is described in the specification, for example, at p. 65, lines 6-12 and the cited passage at p. 70, lines 29-34, and is circuitry for performing “differential” common mode modulation, “in which the difference between the modulated common mode levels of the two [conductor] pairs determines the auxiliary data,” as described at p. 65, lines 6-12. Applicants contend that this description is clear and unambiguous.

Claims 1-3, 5-32, 34-51, 53-55, 57-81, 86-90, and 95-143 stand rejected under 35 U.S.C. 112, second paragraph, on the ground that the phrase “TDMS-like link” (or TDMS-like communication link”) recited therein is vague and indefinite. In response, Applicants contend that the noted phrases (which are synonyms) are unambiguously defined in the specification and thus, that the rejected claims satisfy the requirements of 35 U.S.C. 112.

At page 6, the specification of the present application defines the phrase “TMDS-like link” as:

a serial link, capable of transmitting digital video data (and a clock for the digital video data) from a transmitter to a receiver, and optionally also transmitting one or more additional signals ... between the transmitter and receiver, that is or includes either a TMDS link or a link having some but not all of the characteristics of a TMDS link.

According to this definition, a TMDS link is an example of a TMDS-like link. A TMDS link (e.g., the TMDS link of Fig. 1) is designed to be connected between a transmitter (e.g., transmitter 1 of Fig. 1) and a receiver (e.g., receiver 3 of Fig. 1), and includes four conductor pairs (as well as additional conductors): three conductor pairs that implement video channels (“Channel 0,” “Channel 1,” and “Channel 2” of Fig. 1); and a fourth conductor pair that implements a clock channel (“Channel C” of Fig. 1). Encoded video data and a video clock signal are transmitted as differential signals over the conductor pairs, with signal transmission over the conductor pairs typically occurring in one direction only from a transmitter to a receiver. Other examples of TMDS-like links that are not TMDS links are described in the application’s specification. Each TMDS-like link is a serial link that is capable of transmitting digital video data (and a clock for the digital video data) from a transmitter to a receiver. Although different TMDS-like links may have different numbers of conductors, may transmit digital video data in different formats (e.g., unencoded digital video, or digital video encoded in any of a variety of different ways), and may transmit data other than digital video data (as well as digital video data and a clock for digital video data), the definition of “TMDS-like link” is believed to be unambiguous.

The recited expression “TMDS-like link” is defined unambiguously in the specification. Thus, Applicant contends that the claims are unambiguous and satisfy the requirements of 35 U.S.C. 112, and properly recite the expression “TMDS-like link.”

Claim 15 is hereby amended to replace the term “thereby” discussed with reference to the rejection under 35 U.S.C. 112, second paragraph. As amended, claim 15 is believed to satisfy the requirements of 35 U.S.C. 112.

Claims 1, 2, 5, 8-12, 15-21, 36-37, 42-44, 47-49, 68, 74, 76, and 81 (and apparently also claims 86, 95, and 99) stand rejected under 35 U.S.C. 102(b) as being anticipated by the “DVI document” identified in the Office Action. In response, Applicants respectfully contend for the following reasons that the uncanceled ones of the rejected claims as hereby amended are patentable over the cited reference.

Claim 1 recites a communication system, including a transmitter, a receiver, and a TMDS-like communication link, wherein the transmitter is configured to transmit video data over the link to the receiver and to transmit auxiliary data to the receiver by modulating DC disparity of a channel of the communication link. The DVI document fails to teach or suggest transmission of auxiliary data to a receiver by modulating DC disparity of a channel of a communication link. The cited passage of the DVI document (the first and last paragraphs of Section 3.1.4 on page 25) merely teaches conventional TMDS encoding of 8-bit words of pixel data as 10-bit TMDS code words (consistent with the description of this conventional encoding method set forth above in the present document). Such conventional TMDS encoding implements DC balancing to maintain approximate DC balance of the channel over which the code words are transmitted. Even if one considers (for the sake of argument) the tenth bit of each code word (which indicates whether bits of the nine other code word bits have been inverted) to be auxiliary data, the conventional TMDS encoding does not transmit such “auxiliary data” by modulating DC disparity of a channel of a communication link (i.e., the DC disparity of the channel does not indicate the value of any such tenth bit). Applicants also contend that the tenth bit of a conventional TMDS code word is not “auxiliary data” and is instead video data (because it is a portion of a 10-bit code word indicative of an 8-bit video data word, and indicates only the encoding algorithm employed to encode the remaining portion of the 10-bit code word). The expression “auxiliary data” is defined on page 8 of the present application’s specification as “digital audio data or any other type of data other than video data and timing information for video data (e.g., a video clock).” It cannot reasonably be contended that a portion of an encoded video word, that is indicative only of the encoding algorithm employed to generate the encoded video word, is indicative of data other than encoded video data (the encoded video word). Thus, claim 1 and all claims that depend directly or indirectly thereon are patentable over the DVI document.

Claim 10 recites a communication system including a transmitter, a receiver, and a communication link, wherein at least one of the transmitter and the receiver is configured to transmit a stream of data words determining auxiliary data over the link, a data structure of each of at least a subset of the words is indicative of DC disparity, and the auxiliary data are determined by one of a sequence of values of the DC disparity and a sequence of differences between successive ones of the values of the DC disparity. The DVI document fails to teach or suggest transmission of such a stream of data words that determine auxiliary data. The Office Action contends that the “tenth bit” of a conventional TMDS code word (as described in Section 3.1.4 of the DVI document) is “auxiliary data” as recited in claim 10. Applicants disagree, and contend that the tenth bit of a conventional TMDS code word is not “auxiliary data” as recited and is instead video data (because it is a portion of a 10-bit code word indicative of an 8-bit video data word, and indicates only the encoding algorithm employed to encode the remaining portion of the 10-bit code word). As noted above, the expression “auxiliary data” is defined on page 8 of the present application’s specification as “digital audio data or any other type of data other than video data and timing information for video data (e.g., a video clock).” It cannot reasonably be contended that a portion of an encoded video word, that is indicative only of the encoding algorithm employed to generate the encoded video word, is indicative of data other than encoded video data (the encoded video word). Thus, claim 10 and all claims that depend directly or indirectly thereon are patentable over the DVI document.

Amended claim 15 recites a method for sending data over a TMDS-like communication link, comprising a step of transmitting a stream of data words over at least one channel of the link so as to modulate DC disparity of the channel, such that the DC disparity is indicative of auxiliary data. The DVI document fails to teach or suggest any method including such step. The cited portions of the DVI document (Fig. 3.1 and Section 3.1.4 on page 25) merely teach conventional TMDS encoding of 8-bit words of pixel data as 10-bit TMDS code words (consistent with the description of this conventional encoding method set forth above in the present document) and transmission of the resulting code words. Such conventional TMDS encoding implements DC balancing to maintain approximate DC balance of the channel over which the code words are transmitted. Even if one considers (for the sake of argument) the tenth bit of each code word (which indicates

whether bits of the nine other code word bits have been inverted) to be auxiliary data, the conventional TMDS encoding does not modulate DC disparity of a channel of a communication link such that the DC disparity of the channel indicates the value of any such tenth bit. Applicants also contend that the tenth bit of a conventional TMDS code word is not “auxiliary data” and is instead video data (because it is a portion of a 10-bit code word indicative of an 8-bit video data word, and indicates only the encoding algorithm employed to encode the remaining portion of the 10-bit code word). The expression “auxiliary data” is defined on page 8 of the present application’s specification as “digital audio data or any other type of data other than video data and timing information for video data (e.g., a video clock).” It cannot reasonably be contended that a portion of an encoded video word, that is indicative only of the encoding algorithm employed to generate the encoded video word, is indicative of data other than encoded video data (the encoded video word). Thus, claim 15 and all claims that depend directly or indirectly thereon are patentable over the DVI document.

Claim 18 recites a transmitter including circuitry configured for generating and asserting an output signal for transmission (in response to auxiliary data) over a channel of a TMDS-like link, where the output signal modulates DC disparity of the channel and is indicative of the auxiliary data. The DVI document fails to teach or suggest such generation and transmission of such an output signal over a channel of a serial link. To the extent pertinent, the cited portions of the DVI document (Fig. 3.1, Table 2.6, and Sections 3.1.1 and 3.1.4) disclose a transmitter configured to receive a Hot Plug Detection signal (which the Examiner considers to be auxiliary data) from a receiver and to transmit encoded video data (and a clock signal) to the receiver. However, even if one considers (for the sake of argument) the Hot Plug Detection signal (received by the transmitter) to be “auxiliary data” as recited and the encoded video data (or clock signal) to be an “output signal” as recited, the output signal transmitted by the transmitter is not “indicative of” the auxiliary data as required by the claim. Nor is the encoded video data (or clock signal) transmitted by the DVI document’s transmitter generated “in response to” the Hot Plug Detection signal. In contrast, the output signal recited in claim 18 is generated “in response to” the recited auxiliary data. The DVI document’s transmitter transmits encoded video data (and a clock signal) in response to input video data (to be encoded), but such input video data are not received from the receiver that asserts the Hot Plug Detection signal to the transmitter. Thus, claim 18 (and

each claim which depends directly or indirectly therefrom) is patentable over the DVI document.

Amended claim 36 recites a system including a transmitter is configured to transmit video data over a TMDS-like link (including at least one multi-purpose line) to a receiver, where the transmitter and receiver are operable in a first mode in which one of them transmits a first signal indicative of digital audio data over the at least one multi-purpose line to the other one of them, and the transmitter and the receiver are operable in a second mode in which one of them transmits a second signal over the at least one multi-purpose line to the other one of them. The DVI document fails to teach or suggest such transmission of a signal indicative of digital audio data over a serial link. Thus, amended claim 36 (and each claim which depends directly or indirectly therefrom) is patentable over the DVI document.

Amended claim 39 recites a system including a transmitter is configured to transmit video data over a TMDS-like link (including at least one power line) to a receiver, where the transmitter and receiver are operable in a first mode in which one of them transmits a first signal indicative of auxiliary data over the at least one power line to the other one of the transmitter and receiver, and the transmitter and the receiver are operable in a power supply mode in which the transmitter provides DC power to the receiver over the at least one power line, and wherein the first mode is a data transmission mode in which the transmitter transmits digital video data to the receiver over a digital video channel of the link and at least one of the transmitter and the receiver transmits the first signal over the at least one power line to the other one of the transmitter and the receiver. The DVI document fails to teach or suggest such use of a power line of a TMDS-like link. Thus, claim 39 and claim 40 which depends therefrom are patentable over the DVI document.

Amended claim 42 recites a transmitter including: circuitry configured to generate a video signal and assert the video signal for transmission over a channel of a TMDS-like link, and to generate a second output signal indicative of auxiliary data (received by the transmitter) and assert the second output signal for transmission over a downstream device status line of the link; and additional circuitry operable in a monitoring mode in which it monitors the downstream device status line to determine presence of a downstream device.

The DVI document fails to teach or suggest such generation and transmission of such a second output signal (“indicative of auxiliary data”) over a downstream device status line a serial link. To the extent pertinent, the cited portions of the DVI document disclose a transmitter configured to receive signals (e.g., signals indicative of EDID data) asserted on a DDC line and send signals over the DDC line. Apparently, the Examiner considers such EDID data (or other signals received on the DDC line) to be “auxiliary data” as recited. However, even if one considers (for the sake of argument) data received on a DDC line by the transmitter to be “auxiliary data” as recited, the DVI document neither teaches nor suggest that a transmitter should assert an output signal “indicative of” such auxiliary data on a downstream device status line as required by the claim. Thus, claim 42 (and each claim which depends directly or indirectly therefrom) is patentable over the DVI document.

Amended claim 43 recites a system including a transmitter configured to transmit video data over a video channel of the link to the receiver, wherein the link includes an additional channel for bidirectional communication between the transmitter and at least one of the receiver and a device associated with the receiver, and wherein at least one of the transmitter and the receiver is operable in a mode in which it transmits digital audio data over the additional channel to the other one of the transmitter and the receiver. The DVI document fails to teach or suggest such transmission of a signal indicative of digital audio data over a bidirectional channel of a serial link. Thus, amended claim 43 (and each claim which depends directly or indirectly therefrom) is patentable over the DVI document.

Claim 48 recites a system including a transmitter operable in a first mode in which it transmits video data to a receiver over a first subset of the video channels of a TMDS-like link but not a second subset of the video channels, where the transmitter is also operable in another mode in which it transmits video data to the receiver over all of the video channels, and the transmitter is configured to transmit auxiliary data to the receiver over the second subset of the video channels during the first mode. The DVI document fails to teach or suggest a transmitter operable in such a “first mode.” The cited portions of the DVI document (including Fig. 3-3) disclose a dual TMDS link. However, there is no teaching or suggestion determinable from the DVI document that a transmitter should operate in a mode in which it transmits video data over a first subset of the video channels of a TMDS-like link (e.g., the

six video channels of the Fig. 3-3 link) and transmits auxiliary data (but not video data) over a second subset of the video channels. Contrary to the assertion in the Office Action, the clock channel of the Fig. 3-3 link of the DVI document is not a video channel. No video data is transmitted over such clock channel. Thus, claim 48 (and each claim which depends directly or indirectly therefrom) is patentable over the DVI document.

Amended claim 68 recites a system including a transmitter, a receiver, and a TMDS-like communication link. The transmitter is configured to transmit video data to the receiver over a first channel of the link, at least one of the transmitter and the receiver is configured to transmit a first stream of auxiliary data (comprising audio data) over a second channel of the link, and at least one of the transmitter and the receiver is configured to transmit a second stream of auxiliary data over one of the first channel of the link and a third channel of the link. The DVI document fails to teach or suggest transmission of a stream of auxiliary data comprising audio data over a channel of a serial link (or a system having the other limitations of amended claim 68 and configured to transmit an auxiliary data stream comprising audio data). Thus, amended claim 68 (and each claim which depends directly or indirectly therefrom) is patentable over the DVI document.

Amended claim 86 recites a method for sending data over a TMDS-like communication link comprising steps of transmitting video data over at least a first channel of the link; and transmitting a first stream of auxiliary data (comprising audio data) over a second channel of the link. The DVI document fails to teach or suggest transmission of a stream of auxiliary data comprising audio data over a channel of a serial link (or a method including the other limitations of amended claim 86 and including a step of transmitting an auxiliary data stream comprising audio data). Thus, amended claim 86 (and each claim which depends directly or indirectly therefrom) is patentable over the DVI document.

Amended claim 95 recites a communication system, including a transmitter, a receiver, and a TMDS-like link between the transmitter and the receiver. The transmitter is configured to transmit video data to the receiver over at least a first channel of the link, the transmitter and receiver are configured to operate in a first mode in which one of the transmitter and receiver asserts a signal indicative of auxiliary data (comprising audio data)

over a second channel of the link, and the transmitter and receiver are configured to operate in a second mode in which said one of the transmitter and receiver asserts a second signal over the second channel. The DVI document fails to teach or suggest transmission of auxiliary data comprising audio data over a channel of a serial link (or a system having the other limitations of amended claim 95 and configured to transmit auxiliary data comprising audio data). Thus, amended claim 95 (and each claim which depends directly or indirectly therefrom) is patentable over the DVI document.

Claim 35 stands rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,724,432 (“Grigorian”). In response, Applicants contend that claim 35 is patentable over Grigorian for the following reasons.

Claim 35 recites a transmitter for use in data transmission over a TMDS-like link, including circuitry configured for generating an output signal in response to auxiliary data and asserting the output signal to an output for transmission, wherein the output signal is indicative of a stream of binary data words that determine an analog auxiliary signal as well as video data, wherein the analog auxiliary signal is indicative of auxiliary data. The following example of such an output signal is described on page 50 of the present application’s specification: an analog auxiliary signal transmitted in at least one DC disparity channel of a TMDS-like link. In each DC disparity channel, as the accumulated DC disparity changes, the maximum allowed DC disparity value (beyond which the DC disparity channel cannot be used) is dynamically changed so that the envelope of the DC disparity wander is itself an analog signal indicative of the auxiliary data to be transmitted.

Grigorian merely discloses time-division multiplexing in which an analog audio signal (e.g., analog audio 46 of Fig. 4) is transmitted for a time, and then an analog video signal (e.g., analog video 47 of Fig. 4) is transmitted during a subsequent time interval on the same cable. Grigorian fails to teach or suggest transmitting a stream of binary data words that determine an analog auxiliary signal as well as video data.

Claims 1-2, 5, 8-10, 12, 15-17, 36-37, 41, 43-44, 46, 51, 57, 59, 65-66, 68-72, 76-78, 81, 86, 89-90, 95, 99, 101, 106-107, 110-111, 125, and 130 stand rejected under 35 U.S.C.

102(e) as being anticipated by U.S. Application Publication No. 2002/0163598 (Pasqualino). Applicants contend that it is improper to reject claims of the present application over Pasqualino because Pasqualino is not prior art under 35 U.S.C. 102 to the present invention. Pasqualino is not prior art under 35 U.S.C. 102(e) because it was filed in the U.S. on January 23, 2002, which is after the September 12, 2001 filing date of the present application. Thus, the rejected claims are patentable over Pasqualino.

Claim 112 stands rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,618,774 ("Dickens"). In response, claims 112-115 are canceled.

It is respectfully submitted that all uncancel ones of the pending claims, as hereby amended, are in condition for allowance.

Respectfully submitted,

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